

What is claimed is:

1. An X-ray fluoroscopic apparatus comprising:

an X-ray source;

an X-ray camera located at a position on which X-rays
5 emitted from said X-ray source are incident;

a sample table, located between said X-ray source and
said X-ray camera, for supporting a sample;

a tilting mechanism for tilting said X-ray camera to a
given tilting direction;

10 a positioning moving mechanism for moving said sample
table in x- and y-axes, orthogonal to each other, on a plane
along a surface of said sample table in order to position a
sample to be within a visual field of said X-ray camera;

a rotating mechanism for rotating said sample table
15 together with said positioning moving mechanism about a z-axis
extending in directions in which said sample table moves to
and from said X-ray source, said z-axis being orthogonal to
said x-axis and said y-axis;

a position correction moving mechanism for moving said
20 sample table together with said rotating mechanism and said
positioning moving mechanism in the tilting direction of said
X-ray camera;

a z-axis moving mechanism for moving said sample table
together with said position correction moving mechanism, said
25 rotating mechanism and said positioning moving mechanism in

the z-axis direction; and

a tilting tracing mechanism for driving said correction moving mechanism and said z-axis moving mechanism according to a tilting angle of said X-ray camera while not driving said positioning moving mechanism, when said X-ray camera is tilted by said tilting mechanism, so that a viewpoint of the sample and a fluoroscopic magnification factor before said X-ray camera is tilted can be kept.

10 2. The X-ray fluoroscopic apparatus according to claim 1, wherein said tilting tracing mechanism calculates a moving speed and a movement amount of said position correction moving mechanism and a moving speed and a movement amount of said z-axis moving mechanism based on the tilting angle of said X-ray camera, and said tilting tracing mechanism drives said position correction moving mechanism and said z-axis moving mechanism so that they move with respective calculated moving speeds and movement amounts.

20 3. An X-ray fluoroscopic apparatus comprising:
 an X-ray source;
 an X-ray camera located at a position on which X-rays emitted from said X-ray source are incident;
 a sample table, located between said X-ray source and
25 said X-ray camera, for supporting a sample;

a tilting mechanism for tilting said X-ray camera to a given tilting direction;

a positioning moving mechanism for moving said sample table in x- and y-axes, orthogonal to each other, on a plane
5 along a surface of said sample table in order to position a sample to be within a visual field of said X-ray camera;

a rotating mechanism for rotating said sample table together with said positioning moving mechanism about a z-axis extending in directions in which said sample table moves to
10 and from said X-ray source, said z-axis being orthogonal to said x-axis and said y-axis;

a position correction moving mechanism for moving said sample table together with said rotating mechanism and said positioning moving mechanism in the tilting direction of said
15 X-ray camera;

a z-axis moving mechanism for moving said sample table together with said position correction moving mechanism, said rotating mechanism and said positioning moving mechanism in the z-axis direction; and

20 an in-changing-magnification-factor tracing mechanism for driving said correction moving mechanism according to a movement amount of said sample table in the z-axis direction while not driving said positioning moving mechanism, when said sample table is moved in the z-axis direction in a state that
25 X-rays are tilted by said tilting mechanism, so that a viewpoint

of the sample before said movement of said sample table in the z-axis can be kept.

4. The X-ray fluoroscopic apparatus according to claim 3, wherein said in-changing-magnification-factor tracing mechanism calculates a movement distance of said correction moving mechanism based on the movement amount of said sample table in the z-axis direction, and drives said correction moving mechanism so that it moves by the calculated movement distance.

10